

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F04B43/04 F04B43/09 H04R19/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F04B H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 322 899 A (MISUZERIE CO., LTD.) 5 July 1989 (1989-07-05) page 2, line 15 - page 3, line 7 page 3, line 30 - page 4, line 20. figures 1,2,5 ----- US 4 648 807 A (THE GARRETT CORPORATION) 10 March 1987 (1987-03-10) column 1, line 44 - column 2, line 14 column 2, line 48 - column 5, line 42 figures 4,8-10 ----- -/-	1,4-8, 10,11, 13,18,20
X		1,5,6, 10,13,18

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

6 October 2004

Date of mailing of the international search report

13/10/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Gnüchtel, F

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/146333 A1 (DREVET, J.-B.) 10 October 2002 (2002-10-10) cited in the application paragraph '0010! - paragraph '0011! paragraph '0025! - paragraph '0032! figures 1-4 ----- US 2002/122561 A1 (PELRINE, R.E. ET AL.) 5 September 2002 (2002-09-05) paragraph '0002! - paragraph '0010! paragraph '0045! - paragraph '0055! figures 4,5 ----- DE 36 18 106 A (SIEMENS AG) 3 December 1987 (1987-12-03) column 2, line 17 - column 3, line 39 column 4, line 25 - line 45 figures 2-5 -----	1,7, 10-15, 18,20 1,2,4, 18,19 1

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0322899	A	05-07-1989	JP DE DE EP US	1174278 A 3881668 D1 3881668 T2 0322899 A2 4939405 A	10-07-1989 15-07-1993 23-09-1993 05-07-1989 03-07-1990
US 4648807	A	10-03-1987	CA DE EP JP JP JP	1309071 C 3667322 D1 0202836 A1 1658202 C 3023758 B 61261685 A	20-10-1992 11-01-1990 26-11-1986 21-04-1992 29-03-1991 19-11-1986
US 2002146333	A1	10-10-2002	US	2001001278 A1	17-05-2001
US 2002122561	A1	05-09-2002	US US US US US US JP WO US	6343129 B1 2003214199 A1 6376971 B1 6543110 B1 6545384 B1 2002050769 A1 2001524278 T 9835529 A2 6781284 B1	29-01-2002 20-11-2003 23-04-2002 08-04-2003 08-04-2003 02-05-2002 27-11-2001 13-08-1998 24-08-2004
DE 3618106	A	03-12-1987	DE WO EP JP	3618106 A1 8707218 A1 0310605 A1 1500892 T	03-12-1987 03-12-1987 12-04-1989 30-03-1989